

ANNUAL REPORT

FISCAL YEAR 1999

ARCATA FISH AND WILDLIFE OFFICE ARCATA, CALIFORNIA

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Date	_
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FORWARD

Prior to the implementation of the Northwest Forest Plan (NFP), the Arcata Fish and Wildlife Office (AFWO) was primarily a fisheries field station. Yearly, AFWO staff prepared the Station Report that summarizes station activities and accomplishments. This document was intended for informational use by the Fish and Wildlife Service's fishery managers in the Washington, D.C. offices.

AFWO's activities are focused primarily in the Klamath/Central Pacific Coast Ecoregion. Major goals are to facilitate implementation of the Northwest Forest Plan (NFP) and to support the restoration of depleted fish stocks by providing fishery expertise and technical assistance to various federal, tribal, state and private entities. Other goals of AFWO include: employee development and training, public outreach and environmental education, and programs designed to provide the leadership necessary to effectively manage our natural resources.

AFWO was established in 1977, at the request of Bureau of Indian Affairs (BIA), to provide biological and harvest data within the Hoopa and Yurok Indian Reservations necessary for management of the Klamath River Basin fishery resources. The U.S. Fish and Wildlife Service (USFWS) was selected for program development because of its recognized federal leadership in scientifically based fishery management.

The course of the programs, and the role of AFWO in addressing resource related issues involving the Klamath River Basin, evolved in response to a Statement of Responsibilities and Role of the Fisheries Resources Program, and through a Memoranda of Agreement with BIA. Over the years, AFWO expanded its activities beyond the reservation boundaries to encompass the Klamath River and Trinity River Basins. Annual projects conducted within the basin include: monitoring of wild and hatchery juvenile salmonid production, habitat assessment, fall chinook spawning surveys and age composition, and water quality monitoring. AFWO has also expanded its activities beyond the Klamath Basin to include monitoring and assessment programs on Humboldt Bay National Wildlife Refuge Complex (HBNWRC) and conducting marine surveys for the endangered marbled murrelet

Since Fiscal Year (FY) 1995, AFWO has been an active participant in implementing the NFP in Northern California and Southern Oregon. Forest Plan activities conducted by AFWO during FY 1999 are described in the section titled "Northwest Forest Plan."

Forest Resource activities including Habitat Conservation Planning (HCP) and Jobs in the Woods (JITW)continued in FY 1999. National Marine Fisheries Service (NMFS) biologists are co-located at AFWO, and are integral players in the multi-agency HCP effort.

STATION OPERATIONS

Most AFWO activities fall within five general responsibilities of USFWS programs.

- 1. To facilitate restoration of depleted, nationally and locally significant, fishery resources.
- 2. To assist with management of fishery resources on federal and Indian lands, and co-manage fishery resources with the State.
- 3. To maintain a federal leadership role in scientifically based management of national fishery resources.
- 4. Participate in the implementation of the NFP.
- 5. Habitat Conservation Planning.

On November 19, 1999, the AFWO staff moved into a new GSA building at 1655 Heindon Road in Arcata. This project had been in the planning stages for several years. The new building will also be occupied by staff of the National Marine Fisheries Service, the National Park Service, and the U.S. Geological Survey. The building is also located next door to the Arcata Bureau of Land Management Office.

STATION STAFF

AFWO was staffed by 32 permanent and 15 temporary or term employees. Combined they accounted for 43 FTEs. Staff duties for several people were reorganized to address the

national priority on Habitat Conservation Planning (HCP). The reorganization affected the HCP, Endangered Species, and Federal projects staff areas.

FISHERIES PROGRAM

The AFWO Fisheries Program has been involved with fishery studies throughout California with the majority of activities centered in the Klamath River Basin in Northern The Klamath River flows through portions of Oregon and California within the boundaries of the Six Rivers, Klamath, and Shasta-Trinity National Forests (Figure The Klamath River Basin has historically supported large runs of chinook salmon (Oncorhynchus tshawytscha) and steelhead trout (O. mykiss). While these runs still contribute considerably to subsistence and sport fisheries in Northern California and Southern Oregon the same cannot be said for the ocean commercial fisheries. The ocean commercial fishery for chinook salmon in the Klamath Management Zone (from Shelter Cove in Northern California to Port Orford in Southern Oregon) first began to experience severe regulatory restrictions in 1985 and is now all but The ocean commercial fishery for coho salmon eliminated. (O. kisutch) in Northern California has also been virtually eliminated.

Generations of Indians have utilized fishing grounds in the Klamath River Basin. Their fisheries for salmon, steelhead, and sturgeon (Acipenser sp.) have historically provided the mainstay of Indian economy in the area. The Hoopa Valley Indian Reservation (HVIR) borders 26 kilometers(km) of the Trinity River, the largest tributary in the basin, and the Yurok Indian Reservation (YIR) borders the lower 68 km of the Klamath River. The Karuk Tribe of California (KTC) actively fishes the mainstem Klamath River above its confluence with the Trinity River. These tribes place great cultural and economic value on the subsistence and commercial fisheries.

Concern about the depletion of anadromous salmonid resources and associated habitat degradation in the basin emerged around the turn of the century, and has accelerated in recent decades coincident with expanded logging and fishing operations, dam building activity, road construction, water

diversions, other development projects, and drought. As in other river systems of the Pacific Northwest, chinook salmon and other anadromous fish of the Klamath River Basin have experienced the continued effects of habitat degradation, drought, and over-exploitation as reflected by declining runs.

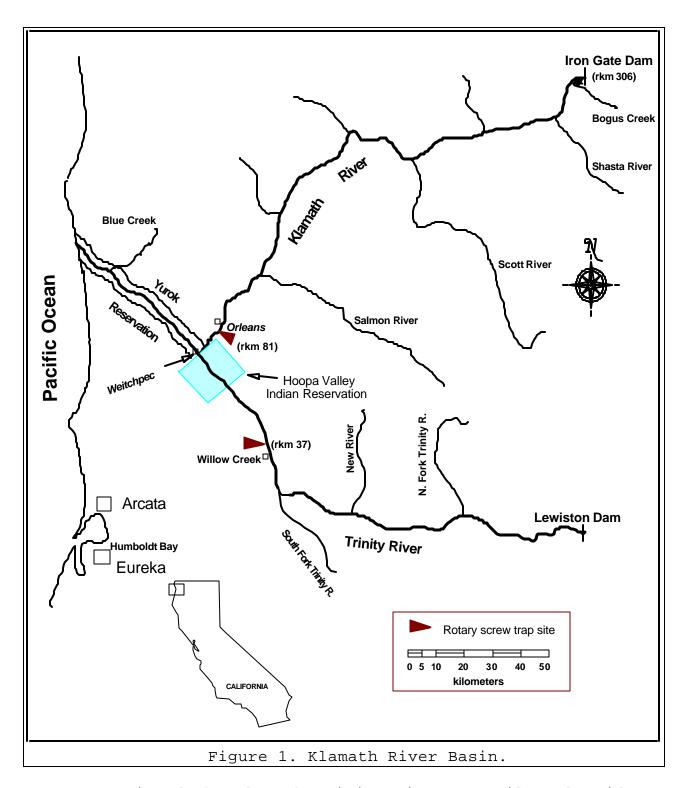
The passage of 16 U.S.C. 1801-1882, the Magnuson Fishery Conservation Management Act of 1976, and the promulgation of the first set of federal fishing regulations marked the beginning of Indian fishing regulations on the YIR and the HVIR in 1977. Since that time, considerable attention has focused on the ocean troll and indian gill-net fisheries on the Klamath and Trinity Rivers. In 1985, the Klamath River Salmon Management Group was formed to provide recommendations for the management of the combined fisheries operating on Klamath River chinook stocks.

Federal and state governments have recognized the importance of protecting and enhancing fishery resources of these rivers by enacting legislation. In 1984, Congress passed the Trinity River Basin Fish and Wildlife Management Act, P.L. 98-541. The intent of this act was to restore anadromous fish populations of the Trinity River system. The program, which was originally authorized for 10 years, has been reauthorized for several additional years.

Concomitant to P.L. 98-541, Congress enacted P.L. 99-552, the Klamath River Basin Fishery Resources Restoration Act, on October 27, 1986. This action authorized the Secretary of the Interior to restore the anadromous fish populations to optimum levels, in both the Klamath and Trinity Rivers, through a 20 year habitat restoration program. The Act also created the Klamath Task Force (KTF) and the Klamath Fishery Management Council (KFMC), which deals with harvest allocation of Klamath River salmon.

AFWO conducts fishery related studies through the auspices of both restoration acts in the Klamath River Basin through an annual proposal process. These efforts focus on the monitoring and evaluation of wild and hatchery anadromous stocks and their habitats.

Klamath River Basin Projects



AFWO continued the Klamath/Trinity River Juvenile Salmonid



Figure 2. AFWO's rotary screw trap operating in the Trinity River.

Monitoring Program in FY 1999. Objectives were to calculate and compare year-to-year abundance indices, estimate the relative contribution of hatchery and natural stocks, determine rates and peak timing of natural and hatchery stock migrations, and assess the general health of hatchery and natural stocks. Eight foot diameter rotary screw traps, constructed by the AFWO, were utilized on both the Klamath and Trinity Rivers (Figure 2). The monitoring work on the Klamath River was shared with staff from the Karuk Tribe of California administered through a cooperative agreement.

In 1999, monitoring on the Klamath River began on April 11 and

concluded August 10. The rotary trap operated effectively 115 (95%) of the 121 days possible. The 1999 Klamath River young-of-year chinook abundance index totaled 842,000 (1991-1998 average annual index = 933,000). The natural or wild component of the 1999 total chinook index was 357,000. The 1999 index

for wild steelhead smolts totaled 33,400; second highest on

record and the second straight year of high abundance. The coho smolt abundance index (1,200) for 1999 was well below the 1991-1998 average (2,200).

Other species captured included Pacific and river lamprey, speckled dace, Klamath smallscale sucker, prickly, coastrange, and marbled sculpin, golden shiner, threespine stickleback, catfish species, black crappie, yellow perch, bluegill, largemouth bass, and other minnow species. Funding for this project was received from several sources through the Klamath River Fishery Restoration Program's (KRFRP) annual proposal process, with additional project funding provided by the Bureau of Reclamation (BOR) and the AFWO.

Klamath River Technical Advisory Team (KRTAT)

The KRTAT provides technical support to the KFMC for the harvest management of Klamath River anadromous fishery resources. AFWO staff no longer participate on the KRTAT due to lack of funding.

Klamath Technical Working Group (KTWG)

During FY 1999, Thomas Shaw represented DOI on the Klamath Technical Working Group (KTWG). The KTWG provides technical support to the Klamath Task Force (KTF). The KTWG is involved with the review and prioritization of proposals submitted for funding under the Klamath River Basin fishery Resources Restoration Act (P.L. 99-552). The KTWG then submits a priorty list to the KTF for consideration for funding.

In addition to the annual proposal ranking process, the KTWG addresses technical issues presented at the quarterly KTF meetings. This year the TWG assisted the KTF with sub basin planning, monitoring prioritization, USGS stream gaging station needs assessment, creation of a Klamath River GIS/restoration web site, and the continued coordination with the Klamath River mainstem instream flow studies.

Microhabitat Studies

AFWO staff continued to work on the microhabitat analysis of the Klamath River. AFWO established microhabitat transects and began the collection of velocity and contour data for incorporation into the U.S. Geological Survey's (USGS), midcontinent Ecological Science Center's (MESC) system impact analysis model (SIAM).

AFWO continued the mainstem Klamath River fry density study, funded by USGS and the Klamath River Task Force. This effort focused on the distribution and density of fry chinook, coho and steelhead at the micro- and meso-habitat scale. Informa-tion from this and future studies will assist with the valida-tion of the USGS-MESC salmon production model, for incorpora-tion into a larger model called the System Impact Assessment Model (SIAM). The Bureau of Reclamation funded the continuation of this study for FY-00.

AFWO has also assisted the DOI's efforts in the collection data and analyses in light of the on-going water resource issues facing the Klamath Basin, such as the State of Oregon's Alternative Dispute Resolution process for its Klamath Basin Adjudication and the Department's development of an interim operations plan for the Bureau of Reclamation's Klamath Project.

Adult Salmon Age Composition

Similar to past years, AFWO assisted the Yurok Tribe's Fisheries Department in aging of adult chinook scales. This cooperative effort provides critical age composition data for the Klamath Basin fall chinook escapement.

Mainstem Spawning Surveys

AFWO was funded by the Klamath River Restoration Fund to identify spawning areas and numbers of fall chinook spawners in the mainstem Klamath River. During FY 1999, a total of 135 river kilometers (Iron Gate Dam to the confluence of Indian Creek, at Happy Camp) was surveyed weekly (October 14 to November 19) by use of inflatable catarafts. Salmon redds were marked weekly with flagging and locations were recorded using topographical maps and GPS. Information gathered from this survey included biological and mark sample data on carcasses, and physical measurements of redd

characteristics.

A total of 1,415 redds were observed in the fall of 1998, between Iron Gate Dam to the Indian Creek confluence. The distribution of these redds were similar to those observed in previous years, except a higher percentage were observed closer to Iron Gate Dam.

The California Department of Fish and Game used this information to complete their Klamath River Basin fall chinook escapement estimate.

This survey is considered ongoing monitoring. Funding is contingent upon Klamath River Task Force and Technical Working Group approval.

Trinity River Basin Projects

Juvenile Salmonid Monitoring Program

Juvenile salmonid emigrations were monitored on the Trinity River at Willow Creek (rkm 34) (Figure 1). Monitoring during the spring-summer period began on March 17 and concluded Sept-ember 30, 1999. During this period, the rotary trap operated effectively 189 (96%) of the 197 days possible. 1999 Trinity River young-of-year chinook abundance index totaled 463,000; a decrease from the 1991-1998 average annual index (603,000). The natural or wild component of the 1999 total chinook index was 238,000; substantially lower than the 1991-1998 average (421,000). The 1999 steelhead smolt abundance index was 140,000 and was comprised of 60% wild origin fish. This is the greatest steelhead abundance index observed by AFWO Staff. The 1999 total coho smolt abundance index was just over 104,000 (four times the 1991-1998 average) with hatchery origin coho dominating. Trapping was terminated on September 30 due to a lack of funding. Funding for this project in the past has been through the Trinity River Basin Fish and Wildlife Management Program.

New River Investigations

Since 1988, AFWO has annually assessed juvenile and adult populations of wild steelhead and chinook in New River, a

major tributary to the Trinity River. These surveys have provided valuable information on the status of these fish within this basin.

AFWO did not receive funding to conduct these surveys this year. However, in spite of this shortcoming and the importance of gathering this information, AFWO staff along with volunteers of the California Department of Fish and Game and others gathered some information on the population status within New River. A survey conducted in November indicated that very few chinook salmon were in New River. In the lower twelve miles of New River 18 adult salmon, three salmon redds, and approximately 300 adult steelhead (a mixture of summer and winter-run) were observed. numbers of salmon observed in New River was consistent with the lower escapement observed at the weirs in the mainstem Trinity River. The adult steelhead numbers are not reflective or comparable to previous years data. However, these numbers do indicate a relatively strong run for this year.

Trinity River Channel Rehabilitation Project Monitoring

This project was not funded for this fiscal year. Previously, this project monitored the effectiveness of the channel rehabilitation sites (CRS) and side channels (SC)in providing in-stream habitat for juvenile salmonids.

During 1999, to secure habitat data prior to possible construction of additional channel rehabilitation sites, we surveyed two areas of the river to get data for use in future two dimensional modeling efforts. This information will be used for pre-construction habitat analysis and comparisons with post-construction habitat if channel rehabilitation sites are constructed.

Jay Glase presented results of 1997-98 two-dimensional hydrodynamic modeling efforts from one of the pilot channel rehabilitation sites at the Western Division American Fisheries Society meeting in July.

Sean Gallagher finalized the document reporting the results of our monitoring efforts in 1997 and 1998.

All term personnel that worked on the project since 1997

were either released from employment or took positions elsewhere due to lack of funding.

Mainstem Spawning Surveys

This project was not funded during this fiscal year.

Previous surveys in 1996 through 1998 provided chinook salmon redd distribution information on the mainstem Trinity from the North Fork Trinity downstream to Cedar Flat (approximately 24 miles)

A voluntary survey was conducted in November, 1998. One employee from California Department of Fish and Game, a U.S. Forest Service employee, an intermittent AFWO employee and a citizen of Weaverville, California volunteered their time and some equipment for two days to conduct surveys. We timed the survey to correspond with peak spawning activity of the previous three years.

Results were discouraging; there were 41 redds counted in the entire 24 miles. Counts in the previous three years were 187, 928 and 602 in the same area. Low counts could be due to late spawning or low returns. Consecutive surveys for several weeks are necessary to secure adequate information.

Water Quality Monitoring and Modeling

Similar to previous years, water temperatures of the Trinity River, Klamath River, and select tributaries were monitored during the summer. This information will be used to further refine the Stream Network Temperature (SNTEMP) water temperature model of the Trinity River.

Staff biologists conducted an evaluation of the effects of an increase release from Lewiston Dam on water temperature and dissolved oxygen at the confluence of the Klamath River, approximately 112 miles downstream. During mid September 1999, the Hoopa Valley Tribe requested additional flow from the US. Bureau of Reclamation for ceremonial purposes. Releases were increased by 1200 cfs. A report on this study will be available in the FY 2000.

In August, staff biologist Paul Zedonis gave a presentation at an American Society of Civil Engineers Conference in Seattle, Washington. The presentation focused on the results of a temperature modeling study used in the Trinity River Flow Evaluation that recommends high spring flows for temperature control during smolt salmon and steelhead emigration.

Other Projects

Aquatic Non-indigenous Species (ANIS) Monitoring

AFWO assisted biologist of the University of California Sea Grant Extension program in determining the presence and distribution of the European green crab in Humboldt Bay. AFWO provided equipment and two fishery biologists to deploy and retrieve minnow traps in several core sites around the bay. This cooperative effort was the first USFWS. Investigations in Humboldt Bay and showed the green crab has invaded and continues to multiply in Humboldt Bay. This crab is also present in the bay waters adjacent to Humboldt Bay National Wildlife Refuge Complex.

ECOLOGICAL SERVICE ACTIVITIES

Trinity River EIS/EIR

The U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, Hoopa Valley Tribe, and Trinity County continue to be lead agencies in the preparation of an EIS/EIR. EIS/EIR is intended to assist the Secretary of the Interior in developing recommendations for permanent instream fishery flow requirements, habitat restoration projects, and operating criteria and procedures for Trinity River Division of the Central Valley Project, California. Together, these actions are intended to restore and maintain the natural production of anadromous fish in the Trinity River. recommendations are required by: the January 14, 1981, Secretarial Decision that initiated the Trinity River Flow Evaluation; the Trinity River Basin Fish and Wildlife Management Act (Management Act) (Public Law 98-541); and the Central Valley Project Improvement Act (CVPIA) (Public Law 102-575). The purpose identified in the EIS/EIR, to restore

and maintain the natural production of anadromous fish populations in the Trinity River, is in accordance with the 1981 Secretarial Decision, the Management Act, the CVPIA, and the Federal government's tribal trust responsibility to Native American tribes that have depended on anadromous fishery resources of the Trinity River since time immemorial.

The EIS/EIR is to provide federal, state and local decisionmakers, and the general public with detailed information for each alternative concerning the significant environmental, social, economic, cultural, and other impacts to the Trinity River Basin, as well as impacts to the Central Valley due to decreased trans-basin deliveries of Trinity River water to the Sacramento River Basin. This fiscal year, two Administrative Drafts of the EIS/EIR were prepared and reviewed by the EIS/EIR team and cooperating agencies in preparation for the public review draft (DEIS/EIR). DEIS/EIR analyzes several alternatives, each which consists of combinations of various levels of mechanical restoration measures and instream flow volumes to the Trinity River, as well as spawning gravel augmentation and watershed rehabilitation measures. The recommendations contained in the Trinity River Flow Evaluation, with additional watershed rehabilitation measures, have been formally adopted as the Preferred Alternative. A public review draft was released by October 19, 1999. A final Record of Decision is expected in late summer of 2000.

Trinity River Flow Evaluation Report (TRFE)

The Trinity River Flow Evaluation Report was released in June of 1999, coauthored by USFWS (AFWO) and the Hoopa Valley Tribe, and in consultation with CDFG, USBOR, NMFS, USGS and Department of the Interior. The TRFE is the final product resulting from a 1981 Secretarial Decision, which directed the Service to conduct a 12-year study and provide recommendations to the Secretary of the Interior to restore and maintain anadromous fishery resources below Lewiston Dam. The final recommendations include: increased instream releases into the Trinity River to provide anadromous fish habitat and restore fluvial processes that maintain that habitat; a channel rehabilitation program, a spawning gravel supplementation program, and implementation of an Adaptive Management Program to insure the successful restoration

efforts and the wisest use of water. These combined actions will restore a healthy, functioning river system, which provides the diverse fish habitats required to restore and maintain the natural production of Trinity River anadromous salmonids.

The TRFE recommendations are one of several alternatives under consideration in the Trinity River Mainstem EIS/EIR. The TRFE recommendations, with additional watershed rehabilitation measures, have been formally adopted as the Preferred Alternative in the draft EIS/EIR (see section below).

Klamath Project Operations Plan (KPOP)

The Bureau of Reclamation's Klamath Project provides irrigation water for agricultural and national wildlife refuge lands in the Klamath Basin. In addition to flood control obligations, the Bureau must operate to maintain Upper Klamath Lake elevations and Klamath River flows below Iron Gate Dam (IGD) at levels sufficient to uphold tribal trust obligations and to protect several fish and wildlife species affected by the Klamath Project. Some affected species are listed as threatened or endangered under the ESA.

Throughout the year, AFWO fisheries staff continued to provide review and comment of the Bureau's environmental assessment documents. These assessments lead to the implementation of a preferred operating alternative for the Klamath Project 1999 Operations Plan. Staff continued to provide the Bureau technical information regarding the salmonid resources below IGD.

Lewiston Dam Release Schedule Development

Similar to the past 15 years or so, the AFWO assisted the Bureau of Reclamation (BR) with development of a Lewiston dam release schedule for the Trinity River. The fishery flow schedule was based upon a 340,000 thousand acre-feet allocation. Staff biologists provided technical information to the BR for a Biological Assessment being conducted for Section 7 Consultation for operation of the Trinity River Division of the Central Valley Project.

From November to January staff biologists coordinated a study with other AFWO staff and the NMFS to evaluate the effects of reduced dam releases on coho salmon eggs deposited in redds of the upper Trinity River at higher releases (800 cfs). While the study was not funded, the importance of collecting this data became evident. AFWO staff identified that flow reductions resulted in at least two dewatered coho salmon redds. To assure protection of the coho salmon the BR maintained at a higher-than-normal base flow (500 cfs) until the spring high flow that occurred in May 1999.

Ecosystem Approach to Management

AFWO actively participates in ecoteam conference calls and meetings with the other field stations in this ecoregion (Yreka and Klamath Falls) and with the refuges as well (Klamath Basin Complex and Humboldt Bay National Wildlife Refuge). Personnel and expertise are shared among all stations. Project planning and implementation efforts are shared among the stations in order to make the most efficient use of the collective expertise of the staff in the ecoregion. For example, the environmental contaminants staff in the Yreka office assists with technical project review and advice on water quality-related project review and also assisted with technical review of a mine remediation site near Happy Camp. In addition, all stations coordinate when dealing with water allocation and instream flow technical projects.

ENDANGERED SPECIES

Section 4: Listing and Recovery

The AFWO did not receive any listing assignments during FY 1999. We provided news releases to the media, public, key cooperators, congressional and other contacts with information regarding delisting of the Aleutian Canada goose, peregrine falcon, bald eagle, and tidewater goby. Recovery actions included the following: funding of surveys to determine the distribution, abundance, and status of the marbled murrelet and western snowy plover; and construction of exclosures to protect nests of western snowy plovers. In addition, we reviewed and commented on the Draft Recovery

Plans for the western snowy plover and Oregon silverspot butterfly, and commented on the final rule designating critical habitat for the western snowy plover.

Section 6: Research Activities

We requested and obtained funding to support several key research activities. These activities included the following: surveys by the California Department of Fish and Game to determine the inland distribution of marbled murrelets in Santa Cruz, Marin, Sonoma, and Mendocino Counties; partial funding of studies by the USGS Biological Resources Division to determine habitat use patterns, movements, and activities of radio-tracked marbled murrelets in Santa Cruz County; surveys by the Redwood Sciences Laboratory (USDA Forest Service Research Station) to determine the geographic distribution and habitat use of the Humboldt Marten.

Station staff continued to represent the Service as cooperators in the ongoing Six Rivers and Klamath National Forest Marbled Murrelet Range and Distribution Study. The fourth year of surveys were completed in 1999, the results of which are expected to reduce the need for murrelet surveys for this species in the eastern most zone of this species range in California.

HCP staff worked with the California Department of Fish and Game (CDFG), the California Department of Transportation (Cal Trans), and Mendocino Redwood Company (MRC) to plan and conduct ornithological radar surveys for marbled murrelets in coastal Mendocino and Sonoma counties (Conservation Zone 5). Ten surveys each were funded by Cal Trans and MRC in a pilot study intended to determine the utility of radar to detect murrelet presence in landscapes where this species is suspected to occur. Murrelets were discovered in two new drainages, and the usefulness of this technique was validated. Future radar surveys in this area may be conducted.

AFWO, in cooperation with the Redwood Sciences Laboratory (USFS), conducted offshore marine surveys to determine the relative abundance, adult-to-juvenile ratios and distribution of the endangered marbled murrelet in northern California. Surveys were conducted daily transects between

False Cape and the confluence of the Mad River and extended offshore surveys between Point Arena and Shelter Cove. Surveys were conducted each month. The AFWO research vessel and crew also provided services to Redwood National Park (NPS) to survey peregrine falcon nesting habitats in rocky coastal environments.

In addition, we participated in surveys to determine the occurrence and reproductive status of western snowy plovers on selected beaches throughout Humboldt and Del Norte Counties. Snowy. We also partially funded a study to describe characteristics of western snowy plover nest sites located on gravel bars along the Eel River.

Section 6: Cooperative Grants

We continued our annual coordination with the California Department of Fish and Game to identify and prioritize projects which qualify for funding under Section 6 of the Endangered Species Act.

Consultation

Informal consultation or technical assistance comprised the majority of the workload. Staff completed 416 consultations, of which 405 (97 percent) were informal consultations or technical assistance and 11 (3 percent) were formal consultations. The majority (26/44) of the formal and informal consultations was attributed to Federal agencies other than the Forest Service and Bureau of Land Management; therefore, most consultations were on projects not associated with implementation of the Northwest Forest Plan.

Consultations were completed with agencies such as the National Park Service, Bureau of Indian Affairs, Corps of Engineers, and Federal Highways Administration. The average time to complete formal consultations was 65 days and the average time to complete informal consultation was 28 days. Consultations with the Forest Service and Bureau of Land Management were according to the streamlining guidance. The average time to complete streamlined formal consultations was 53 days and the average time to complete streamlined informal consultations was 41 days. We provided technical

assistance to the Federal Emergency Management Agency and Environmental Protection Agency. In an attempt to reduce workload, we entered into discussions with the Federal Highway Administra-tion and California Department of Transportation to develop a programmatic approach to consulting on projects that result in only disturbance to Federally listed species, or small amounts of habitat modification (<1 acre).

Consultations were completed largely on a project-by-project basis. The exceptions were multi-year (timber stand improvement and vegetation management projects), programmatic (hazard tree removal and road maintenance programs), and batched projects developed by the Forest Service and Bureau of Land Management and programmatic consultations (issuance of special use permits) developed by Redwood National and State Parks. An intra-Service biological opinion was issued on the development of one HCP (Pacific Lumber Company).

Section 9

No activity reported.

Section 10

10(a)(1)(A) Recovery Permits

The AFWO reviewed and facilitated the issuance of several 10(a)(1)(A) permits for several species including the western snowy plover, northern spotted owl, marbled murrelet, and tidewater goby.

Habitat Conservation Planning

Following acceptance of their Habitat Conservation Plan (HCP), an incidental take permit was issued to the Pacific Lumber Company (PALCO) on March 1, 1999 which covered 17 species on 211,700 acres managed primarily for timber production. Prior to permit issuance, significant staff time was spent on working with PALCO on HCP development. Since permit issuance, HCP implementation has continued to occupy approximately 2.5 FTEs. There are several aspects of HCP

implementing which require ongoing FWS involvement. These include watershed analysis, timber harvest plan (THP) review, site-specific consultations, development of research and monitoring plans, and evaluation of research and monitoring results related to adaptive management decisions. HCP staff reviewed 13 THPs for compliance with the HCP, and prepared 21 letters of technical assistance.

The FWS received an application for an Incidental Take Permit for the Ribar Timberlands, a small (1,340 acre) private landowner. This HCP was originally a single species (northern spotted owl) HCP. During the review phase of the original HCP, the National Marine Fisheries Service listed the coho salmon. As a result, the original HCP went back to the applicants for inclusion of measures to add the coho to the incidental take permit. At the end of 1999 the latest version of the draft Ribar HCP was under review.

FWS continues to work with Simpson Timber Company on the development of a multi-species aquatic HCP for approximately 480,000 acres of timber lands in northern California. This HCP will focus on salmonids and headwater amphibians species.

The HCP staff is working cooperatively with the National Marine Fisheries Service to fulfill our tribal trust responsibilities under the Secretarial Order. We have been soliciting input from potentially affected tribes in Northern California, and have developed an informational status table to keep tribes updated on the progress of various HCPs.

Technical Assistance

On July 1, 1999, responding to a request from the California Department of Forestry and Fire protection (CDF), the AFWO began reviewing all timber harvest plans within the range of the federally listed northern spotted owl in Northern California and providing letters of technical assistance to the CDF. The AFWO provided 168 letters of technical assistance as part of this new program. These consultations were previously provided by the California Department of Fish and Game.

The HCP staff prepared an additional 46 letters of technical assistance during FY99, most (76%) of which pertained to

THP-related spotted owl and marbled murrelet issues in coastal Mendocino County. The large number of requests for technical assistance from this region are apparently due to a high level of local environmental activism, turnover of local CDFG personnel, and expanding definitions of suitable marbled murrelet nesting habitat. Staff also continued to provide technical assistance to AT&T and private land owners for campground facilities, fiber optic and other communications-related construction projects. All AT&T projects have avoided take of federally listed species including Lotus blue butterfly, Behren's silverspot butterfly, and the Point Arena mountain beaver.

Federal Permits and Licenses

In Fiscal Year 1999. AFWO continued to build on the accomplishments and partnerships that we have developed since we were assigned the lead for the Federal Permits and Licenses program in northwest California in FY 1997. Arcata currently has one FTE devoted to this program area and that individual divides their time between the Army Corps of Engineers' (Corps) wetland development permitting program and the hydro-power licensing program administered by the Federal Energy Regulatory Commission (FERC).

The Arcata, Klamath Falls, and Sacramento Fish and Wildlife offices share program responsibilities for separate geographic areas within the Service's California/Central Pacific Coast Ecoregion. For the Corps' permitting under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, Arcata has responsibility for Del Norte, Humboldt, and Trinity Counties, Mendocino County, excluding the Russian River Basin, and Siskiyou County, excluding the Sacramento River Basin.

For the FERC's hydropower licensing program, directed by the Federal Power Act, we have responsibility for the same area described for the Corps' permitting program, as well as the remainder of the Klamath River Basin that extends into Oregon. The Klamath basin in Oregon includes much of Klamath County and parts of Jackson and Lake Counties.

Our involvement in wetland and waterway development permits covered a wide range of activities. Focus in activities, however, remained in Humboldt Bay and several of the coastal lagoon and river systems in northwestern California.

<u>Permits</u>

Humboldt Bay, CA

Humboldt Bay is perhaps the premier wetland ecosystem in our area of responsibility. Due to the many human pressures placed upon this estuary, the AFWO expends considerable resources of the permits program here.

Permitting issues have included waterfront development projects, channel deepening and maintenance dredging, large-scale Pacific oyster culture activities, roadway maintenance and improvement, and wetland priorities for compensatory mitigation.

Service priorities in the Bay include the protection and restoration of eelgrass meadows and salt marsh habitats. Tidal wetlands have seen the greatest decrease of any natural habitat around the Bay. These wetlands are important habitats for the many species of migratory and non migratory birds. Eelgrass, an important plant species in the Bay, performs numerous functions. Eel grass provides spawning habitat for herring, cover for larval fishes, and important forage for the black brandt during their migratory stopover on Humboldt Bay.

Commercial shipping has become a particular focus of attention due to associated port development activities and the two significant and directly related oil spills that have occurred on the Bay in recent years.

We frequently coordinate our involvement in Bay related activities with Humboldt Bay National Wildlife Refuge staff and they continue to be a valuable partner in this program.

Lake Earl, CA

Lake Earl is a valuable and ecologically rich coastal lagoon ecosystem located near Crescent City in Del Norte County, CA. Artificial breaching of the lagoon has been conducted since at least the turn of the century by local farmers and

ranchers in order to use adjacent lands for farming and grazing. Native Americans in the area also state that their ancestors periodically breached the lagoon. In recent times, breaching has been conducted to prevent the flooding of uncapped private wells and county roads in the vicinity of the Lake. This action has been a subject of controversy because of an adjacent undeveloped subdivision, approved by the County in the late-60's , which is partially flooded when the lagoon exceeds approximately 8 feet MSL. With the exception of the subdivision, the remainder of the lagoon perimeter, up to the ten-foot elevation, is owned and managed by the State as a Wildlife Area, with a focus on waterfowl management.

The Service participates in the Lake Earl Working Group. This group includes local, State, and Federal governmental partners, as well as NGO's. The function of this group is to better understand and discuss breaching issues between interested parties in a cooperative forum. The Corps recently released a series of studies they contracted to investigate ecological, cultural, and economic issues associated with the breaching of the Lake. Because of the development that has been allowed to occur around Lake Earl, artificial breaching will likely be a necessary action for some time to come. The question to resolve is how and when that breaching will be allowed to occur in order to minimize impacts to the species that depend upon Lake Earl for feeding, breeding, and shelter.

Lake Earl provides habitat for a large number of species, including several that are federally listed, most notably tidewater goby, Aleutian Canada goose, and Oregon silverspot butterfly. Waterfowl and anadromous salmonids are also a concern.

<u>Eel and Mad Rivers, CA</u>

The Service continues to maintain involvement with gravel extraction activities on North Coast rivers through the Corp's Letter Of Permission process that has been established for Humboldt and Del Norte Counties. Most of the activity occurs on the lower Mad and Eel. Of particular interest at this time are extraction related effects on federally-listed western snowy plover on the Eel River. Recent surveys conducted by the AFWO have found snowy

plovers to periodically nest on gravel bars along the lower Eel, a behavior considered to be unique for the Pacific Coast population. Generally, this specie nests on open, sandy beaches along the ocean. We are concerned that pre-extraction survey work by sand and gravel companies on the gravel bars can result in take. Some of these activities have not yet been addressed in the Section 7 consultation with the Corps.

Redwood Creek, CA

Levees were constructed by the Corps of Engineers on the lower four miles of the creek in 1968 in the wake of the 1964 flood event. The levees are now the maintenance responsibility of Humboldt County. The maintenance baseline, if strictly applied, requires streambed gravels and cobbles and riparian vegetation to be removed to maintain channel capacity. The project not only disconnected the creek from its floodplain but also severely impaired the function of the estuary and lagoon. We are working with Humboldt County, the Corps, NMFS, CDFG, the Coastal Commission, and Redwood NP to address flood control in the short-term, while retaining some habitat value, and pursuing long-term solutions which may include modification or removal of the levees.

Willits Bypass

Caltrans is proposing to construct a four-lane freeway bypass of Highway 101 around the City of Willits. Willits is located in the Little Lake Valley which historically consisted mostly of wetlands and fed into Outlet Creek, a tributary of the Eel River which was touted to have the longest run of coho salmon in California. We are working with Caltrans, in addition to other federal and state agencies, and local interests, to minimize the impact of this project on wetlands and develop acceptable compensatory measures for those impacts that cannot be avoided.

Hydropower Licenses

The Klamath/Central Pacific Coast Ecoregion contains 33

active hydroelectric projects licensed or exempted from licensing by the Federal Energy Regulatory Commission. The Potter Valley Project on the Eel River and the Klamath River Hydroelectric Project, are the largest of these and continue to dominate staff time in this program. Both of these Projects have ongoing, significant impacts on what were historically the two most productive anadromous salmonid rivers on the northern California coast. Native American Reservation Lands are located on both rivers and the Service routinely coordinates with Tribes with consideration given towards species of mutual interest and responsibility.

<u>Potter Valley Hydroelectric Project - Eel and Russian</u> <u>Rivers, CA</u>

The Potter Valley Project has been in operation since 1908 and diverts water from the Van Arsdale diversion dam on the upper Eel River to a powerhouse located in Potter Valley in the Russian River Basin. Scott Dam/Lake Pillsbury, located 12 miles upriver from the diversion, provides storage for project operation. Powerhouse releases enter the East Branch Russian River and ultimately flow into the Army Corps' Lake Mendocino/Coyote Dam facility near Ukiah.

Populations of steelhead, coho and chinook salmon in the Eel River below Scott Dam, and the water in which they thrive, are Trust resources of the Round Valley Indian Tribes (RVIT). The RVIT occupy reservation lands about 40 miles downriver from the Van Arsdale diversion. At least one pair of bald eagle have nested at Lake Pillsbury since the late-1960's. Water diverted by the project, in addition to power generation, significantly increases summer flows in the Russian River and is important for recreation , agriculture, and municipal uses in the Upper Russian above Dry Creek.

The mix of anadromous fisheries, high-value agriculture, municipal water, recreation, hydropower, trans-basin diversion, Tribal issues, and the pending sale of PG&E's hydropower assets make this a highly visible and controversial project that attracts the attention of many interest groups and politicians.

The Potter Valley Project has been the focus of significant FWS involvement since the late-1970's. With the issuance of

a new 50-year project license in 1983, PG&E was required to conduct a ten-year fisheries study to evaluate the effects of a new minimum flow regime upon anadromous salmonids in the Eel River. These studies were conducted in coordination with the FWS and CDFG. During this time FWS, CDFG, NMFS, and the RVIT also put considerable efforts into convincing the FERC to order PG&E to replace their inoperative fish screen at the project diversion. After completion of their ten-year study, PG&E submitted a final report and subsequently developed a proposed new flow regime/project operation plan in coordina-tion with the FWS, CDFG, and NMFS. This proposal became FERC's preferred alternative in a Draft EIS for amendment of the project license.

Our most recent involvement occurred in April 1999, when the Service, along with BIA, consultants for the Office of the Solicitor, and the National Marine Fisheries Service, submitted a joint DOI/NMFS flow proposal to FERC along with our comments on the DEIS. As of the date of this report, FERC has yet to issue a Final EIS or order amending the project license.

Klamath River Hydroelectric Project - OR & CA

Relicensing of this complex operation officially starts in FY 2001, but Service planning for this major action has already begun. Project facilities include 8 separate dams and powerhouses spread over 60 miles of the Klamath River in both CA and OR. Hydropower operations occur in conjunction with the Bureau of Reclamation's Klamath Project, which are both dependant upon releases from Upper Klamath Lake.

This proceeding has significant opportunities for the restoration of fish and wildlife habitats in the basin. Resources affected by the project include several anadromous salmonid species, multiple components of the National Wildlife Refuge system, the federally-listed Lost River and shortnose suckers, bald eagle, and numerous other aquatic and terrestrial species. Anadromous salmonid access to upwards of 200 miles of habitat has been precluded since the project's Copco I dam was constructed in 1911.

Anadromous salmonid and sucker populations in the Klamath

Basin are considered Trust Resources of four Native American Tribes. Decommissioning of some or all of the project facilities will be a significant issue in this proceeding.

North Fork Spraque River Project - OR

Bull trout were recently listed as threatened in the Klamath Basin. The fish screens originally constructed on this project in 1985 do not meet criteria currently accepted as protective of fry and juvenile salmonid life stages by federal and state fish and wildlife agencies. We are working with the Oregon Department of Fish and Wildlife and the project licensee to determine the appropriate means for protecting bull trout at the project.

INFORMATION RESOURCE MANAGEMENT (IRM)

The Information Resource Management (IRM) branch of the Arcata Fish and Wildlife Office (AFWO) consisted solely of Greg Goldsmith. Responsibilities include individual computer support, training, and troubleshooting, LAN/WAN maintenance, support and troubleshooting, embedded microchip equipment support, support of smaller offices in the ecoregion, software training, geographic information systems (GIS) and global positioning systems (GPS), and web site development.

Greg spent a large part of the year responding to requests from the AFWO staff, as well as the staff from other offices throughout the ecoregion. Significant events include: planning and implementation of year 2000 readiness, computer support to the Humboldt Bay NWR, planning for new building, and office move.

During FY99, Greg finalized solutions to year 2000 issues with computer systems, embedded microchip equipment, and telephone systems. All systems were brought into compliance through upgrades, patches, or other fixes.

The AFWO web site hosted the final report of the Trinity River Flow Study, and the Draft EIS for Restoration of the

Mainstem Trinity River at www.ccfwo.r1.fws.gov. Greg maintained and updated these sites.

In the area of Geographic Information Systems (GIS), AFWO had successful results in completion of many individual projects. Some of the highlights were:

- 1) Continued interagency cooperation/coordination through the North Coast Geographic Information Cooperative (NCGIC). This included continued funding of a ½ time position from the co-located National Park Service office to assist/collaborate in numerous AFWO GIS projects.
- 2) Further work on the Northern Spotted Owl Baseline analysis for California.
- 3) Continued development of ownership coverage for HCP/Private timberlands.
- 4) Completion of several maps for other FWS offices throughout the ecoregion.
- 5) Produced, cataloged, and distributed vector and raster GIS data on CD-ROM for public use.
- 6) Continued development of the NCGIC web site.

FOREST RESOURCES

"Jobs-in-the-Woods" Watershed Restoration Program

The "Jobs-in-the-Woods" (JITW) Program Coordinator for the Klamath Central/Pacific Coast Ecoregion (KCPE) manages the Program from the Arcata Fish and Wildlife Office (AFWO). The Coordinator oversees the program among four field offices.

The Coordinator was responsible for the following:

- 1) Dissemination of information about the program to other Service field offices, the Provincial Advisory Committees (PACs), private landowners, tribes, businesses, and state agencies
- 2) Entry and update of information on California JITW

- projects into a database for the Regional Office, the state of California, and a federal interagency database of restoration projects,
- Ensuring projects managed directly from the Arcata office met all applicable environmental compliance requirements,
- 4) Writing of documents to meet federal regulatory requirements,
- 5) Attending various watershed group meetings and meetings of Service restoration staff,
- 6) Giving presentations to watershed groups, federal and state agencies about the program,
- 7) Writing Cooperative Agreements and landowner agreements,
- Visiting project sites to assess and monitor restoration efforts,
- 9) Conducting field reviews of potential projects,
- 10) Coordinating JITW restoration efforts with other restoration programs within the Service, and other agencies, including the California Department of Fish and Game's SB 271 watershed restoration program,
- 11) Assisting landowners, businesses, and tribes with the development of restoration projects,
- 12) Assisting applicants with locating other sources of funding for restoration efforts which did not meet JITW requirements, and
- 13) Developing a watershed assessment component to the JITW Request For Proposals and gaining project leader support for the Service accepting proposals to conduct watershed assessment activities.

The KCPE received \$791,000 of JITW funds in fiscal year 1999, of which \$672,350 was allocated to specific projects. Proposals totaling approximately \$2.2 million were received for the JITW program. A total of 10 projects were funded in 9 watersheds within 6 counties in California and Klamath county, Oregon. An example of a restoration project funded by the JITW program is illustrated in Figure X. Projects employed people from timber dependent communities to implement and monitor restoration efforts. Projects funded in 1999 supported road decommissioning, treatment of erosion sources from roads that caused sedimentation of streams, planting of native vegeta-tion, improving instream habitat using large wood, and fencing riparian areas. Since the program's inception in 1995, the KCPE ecoregion provided

\$3.5 million for watershed restoration efforts on non-federal lands. Approximately 44 % of the \$3.5 million available during the five-year time period of the program has been administered by the Arcata office.

The Coordinator represented the JITW program for the ecoregion during the revision of a joint "Request for Proposals" (RFP), for both Fiscal Year (FY) 1999 and 2000, which included 3 watershed restoration programs managed by the Service. The process of revising the document for FY 2000 JITW funds included the writing of a watershed assessment and inventory component to the program. The Coordinator worked to gain support of the four project leaders to allow a portion of JITW funds to be used for funding watershed assessment and invent-ory projects as well as specific habitat restoration and improvement projects. The effort was successful. The Coordin-ator revised the JITW section for both RFP's with editorial assistance from staff at the other three Service offices. The main highlight of the joint RFP process was that one applica-tion form could be used by a proposer to apply for multiple programs. Funding decisions for FY99 proposals occurred in March, and the FY 2000 RFP was sent out to the public in May with proposals due August 31st. Approximately 56 proposals were received for all 3 programs through the FY 2000 RFP with 31 of the proposals being eligible for JITW. In comparison to past years, a greater proportion of proposals received were elig-ible for JITW. During September and October all proposed projects were evaluated in the field by restoration staff of the four offices and other agency employees on the proposal evaluation committee. Final evaluation of proposals for three programs was made in November by an interagency committee of federal biologists, geologists and restoration specialists, representing various areas of expertise, both geographically and within their disciplines. The Coordinator was accompanied by a fisheries biologist from our office to sit on the evaluation committee. The entire process was very successful. The AFWO is likely to receive JITW funds for six projects of the 9 proposals presented by the Coordinator to the evaluation committee. The joint evaluation process helped the Service better coordinate restoration efforts within a watershed and move closer to the goal of conducting restoration efforts with an ecosystem perspective in mind. An example project that was funded through the JITW program is shown in Figure 3.



Figure 3. Rock structure placed in Ah Pah Creek, a tributary to the Klamath River. This structure represented one of many actions funded by the JITW Program to restore the Ah Pah Creek watershed and fish habitat.

The Coordinator worked with Oregon and Washington JITW staff to organize a tri-state JITW meeting at the Portland Regional Office in January of 1999. The KCPE program and accomplish-ments for the past 5 years were presented to division chiefs and program directors at the Regional Office. Program

accomplishments were well received. Office of Technical Support staff worked with us to begin efforts to compile briefing information on the program for Regional Office staff in the future and for a potential visit to the Director's office in Washington D.C.

The Coordinator participated in a 3 month effort to prepare a briefing book on the JITW program among the 3 states. A date was scheduled for a briefing to Jamie Clark and the Directorate for June. The color briefing book was completed with input of photos and text from JITW staff in all 3 states. Service restoration staff from each state traveled to Washington DC and presented the program to the Directorate and staff at Arlington Square. The goal of the visit was to make Washington DC staff aware of this program,

its accomplishments and why it should be a regular and continued part of the Service budget for habitat restoration. No commitment has yet been made by the Service for continual funding but the JITW program budget was included in the FY 2000 and 2001 request for base funding to Congress.

The Coordinator wrote justification to the project leader and the deputy project leader identifying how and why the Partners For Fish and Wildlife(PFW)Program would be a valuable asset to the AFWO. The information was accepted and forwarded to the CNO for approval. CNO accepted the idea of AFWO requesting PFW funds for FY 2000.

NORTHWEST FOREST PLAN

Activities associated with implementation of the Northwest Forest Plan are summarized as follows:

Provincial Resource Board (PRB)

The PRB consists of resource officers from the Six Rivers, Klamath, Shasta-Trinity, and Mendocino National Forests. The PRB was established to assist Forest Supervisors with implementation of the Northwest Forest Plan. Senior staff biologists from the Yreka, Red Bluff, Arcata, and Klamath Falls offices continued to meet with the PRB during 1999. Meetings focused on ongoing work to update the environmental baseline for the northern spotted owl.

Northern Spotted Owl Baseline Team

The Provincial Resource Board and the FWS Project Leaders chartered a technical team in 1997. This team consisted of biologists from the National Forest and Fish and Wildlife Service. Their duties were to complete tasks necessary to update the northern spotted owl baseline for the 4 northern forests in California. The Arcata office was the lead office for this effort.

During 1998, the team reached consensus on definitions of spotted owl habitat, based on ecological unit boundaries, as

opposed to administrative unit boundaries. In 1999, the team began modeling efforts in collaboration with scientists from the Redwood Sciences Laboratory, Arcata, California to determine differences in the ability of the old (FEMAT map) versus new map of suitable habitat to predict occupancy of northern spotted owls. The modeling was completed and the new map was shown to be a substantially better predictor of owl occurrence.

Modeling results were then used to rank individual lateseral reserves on the Six Rivers, Shasta-Trinity, Klamath and Mendocino National Forests relative to their ability to provide for owls. Recommendations for consultation on projects around the reserves (the intervening matrix lands) were then developed according to the reserves' ability to provide for owls. The consultation recommendations will be used by the forests for large landscape level consultations.

Presentations on the development of the habitat definition, modeling process, and consultation recommendations have been given to each of the 4 forests in northern California, the Region 5 Regional Forester, Oregon and Washington Service offices, the Klamath and Coastal California PACs in California, and at several professional scientific meetings and symposia. All presentations were met with acceptance and approval. We anticipate the results will be applied in project planning and consultation in FY2000 and beyond.

Watershed Analysis and Adaptive Management Areas
Workloads and staff levels precluded contribution of
staff time to assist in efforts associated with either
watershed analysis or Adaptive Management Areas during
1998. This scenario is not likely to change in
subsequent years.

Provincial Interagency Executive Committee/Province
Advisory Committee The office is a member of both
committees. Staff regularly attend meetings and
provide technical assistance as needed.

Other Federal Activities

Staff participated in several working groups and project development teams for Federal activities and State activities with Federal commitments. AFWO staff maintain

active membership in the Klamath River Technical Advisory Team as well as other committees on the Klamath River Task AFWO staff also participate on the Technical Advisory Sub-Committee, Monitoring Sub-Committee, and Budget Sub-Committee of the Trinity River Task Force. In addition, staff participate as regular team members on the Coastal California Provincial Advisory Committee and the California Economic Revitalization Team; both teams are part of the implementation of the President's Northwest Forest Plan. Staff are also members of the Humboldt Bay Harbor and Conservation District Interagency Working Group, which is actively developing a management plan for Humboldt Bay. Participation within the Lake Earl Working Group focused on effects of breaching of the coastal lagoon to listed species of wildlife and potential long-term effects on wetlands. Project teams were developed to provide interagency input during planning stages of major road construction activities conducted by Federal Highways Administration, through the California Department of Transportation. Staff participated in consultations and research to minimize adverse effects to western snowy plovers on Eel River gravel bars, and coordinated with the Corps of Engineers, gravel operators and consultants to develop a long-term permit for operations that will avoid or minimize adverse effects to this species. The Arcata Fish and Wildlife Office also assisted in the Natural Resource Damage Assessment for trust resources affected by a fuel spill outside of the Humboldt Bay entrance.

GOALS OF THE FOREST RESOURCES AND NORTHWEST FOREST PLAN

- 1) Continue to expand staff and funding for the California Forest HCP Team efforts on the north coast.
- 2) Continue to expand our ability to address listing and recovery actions on the north coast, and to improve service to Federal and non-Federal partners.
- 3) Continue to work on establishing an environmental baseline of species occurrence, areas surveyed, and suitable habitats. This information is necessary to conduct consultations, develop HCPs and aid in project planning.

- **4)** Become more involved in identifying, funding, and overseeing research projects related to listed species and implementation of the NFP.
- 5) Expand our GIS capabilities with the National Park Service.
- 6) Work to use existing data available for JITW restoration projects within the ecoregion to create a GIS database. Other agencies would have access to the information and the database would allow for input of their data into the system. The goal is to be able to create maps and access information at an inter-agency level to view where we are all working on restoration projects and what we are doing. This information will help us to better plan and identify future restoration projects.
- Work to develop an outreach component to the JITW program.

TRIBAL TRUST

Fisheries

As previously mentioned in the respective report section, the AFWO fisheries staff continue to provide technical assistance, equipment, and guidance to our tribal partners. These efforts include sharing of field activity responsibilities and equipment, training in fishery research techniques, and in co-developing study plans on the Klamath and Trinity Rivers. AFWO staff provide recommendations to water managers that are based on fishery resource science with consideration of our tribal trust obligations.

California Forest and Fire Management Council

We continue to provide technical assistance to the California Indian Forest and Fire Management Council, a coalition of 19 tribes from throughout California. We attended their annual membership meeting as guest speakers to educate council members on various aspects of the

Endangered Species Act. We worked with the executive committee to develop the agenda for next year's annual meeting and to address threatened and endangered species issues of interest to the membership.

Secretarial Order 3206

Secretarial Order 3206, American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act, in part, addresses our tribal trust responsibil-ities. We have a representative on a subcommittee designated to develop implementation steps for the Secretarial Order.

In keeping with the intent of the Secretarial Order, we continue to contact tribes within our geographic area of responsibility. This effort seeks to establish good working relationships.

COOPERATIVE ACTIVITIES

AFWO staff were involved in various cooperative activities during FY 1998, including:

1) We participated in Humboldt State University's annual Career Day event, whereby AFWO and various natural resource management agencies provided employment information and counseling to students seeking federal seasonal and permanent jobs (Figure 4).

2) During the period September-October 1999, the M/V Stuyvesant released at least 1,300 gallons of intermediate fuel oil along the coast of Humboldt County, during dredging operations located at Humboldt



Figure 4. Staff biologists Jim Wadkins (AKA Santa Clause) and Paul Zedonis conduct outreach at Career Day at Humboldt State University.

Bay. The AFWO assisted the California Department of Fish and Game's Office of Oil Spill Prevention and Response (OSPR) to evaluate the status of damaged resources and to locate and rehabilitate oiled birds. Six staff members assisted at a cost of nearly \$12,000.

Affected listed species included the brown pelican, marbled murrelet, and western snowy plover.

Additionally, senior staff biologist David Solis continues to function as assistant manager of the Marine Wildlife Care Center, in Arcata, CA. This Center is part of a seven-station network of wildlife emergency response centers along the coast. The centers play a key role in the rehabilation of oiled

marine birds.

- 3) AFWO conducted a variety of field research projects which involved members of the various tribal, state and/or federal entities in the Klamath Basin. Many of these cooperative work activities were facilitated through cooperative agreements.
- **4)** AFWO provided considerable time and effort disseminating scientific findings to cooperators and the general public.
- 5) Three staff members assisted the Humboldt Bay Wildlife Refuge during their annual effort to remove European beach grass from a portion of the coastal dune ecosystem.

FUTURE OUTLOOK

The Klamath River relicensing efforts along with the water quality adjudication between Oregon and California and the Klamath River Long-Term Operations Plan EIS will require significant staff time in the coming year. In FY2001, additional financial resources may be available to AFWO to deal with these important issues.

Efforts have also been initiated to explore the establishment of a coastal program by AFWO. Contacts with local partners such as the Humboldt Bay Harbor District, the Coastal Conservancy and Humboldt Watershed Advisory Council have been positively received and there appears to be significant support for a Coastal Program effort.

Alternative sources of funds have become increasingly important to sustain the base of financial support for AFWO. Proposals for grant dollars have been identified as one way of addressing this need. To facilitate these efforts a database with active proposal ideas and available grant programs with deadline and application information is being create on the AFWO shared drive for use by staff as needed.

The role of AFWO in addressing resource-related issues involving the Klamath/Central Pacific Coast Ecoregion and elsewhere continues to evolve. Implementing the President's Forest Plan will continue to be a major activity for AFWO in FY 2000. AFWO's Habitat Conservation Planning team will

continue to address HCP needs for the entire geographical area covered under the Northwest Forest Plan.

The AFWO Fishery Program will continue to seek funding as necessary to conduct research and gather information needed for the proper management of hatchery and natural anadromous fish stocks. AFWO Fishery Program staff will continue to seek cooperative activities with state, federal and tribal governments.

The primary area of concern for the AFWO Fishery Program remains to be the near total reliance on reimbursable funding. This situation has become more critical with the conclusion of the Trinity River Basin Fish and Wildlife Restoration Program. Funding received through the Klamath River Basin Fishery Resources Restoration Program, although variable and subject to shifts in funding category (e.g. onthe-ground restoration, monitoring, education) will continue to exert an influence on program direction. Currently, efforts are being made to secure funding for a Klamath River Flow Study - in which AFWO will be a major participant.

1) Juvenile Chinook Salmon Production Monitoring
AFWO intends to continue juvenile salmonid monitoring
activities on the Klamath and Trinity Rivers in FY
2000. We will continue to seek funding to maintain
consistent data collection.

This program is viewed as an ongoing monitoring effort that will provide data on salmonid population trends. This information is important to determine the magnitude of juvenile salmonid production in the Klamath and Trinity Rivers and the relative proportions of hatchery and naturally produced salmonids. Such data will be useful in the evaluation of the current and future restoration efforts.

- 2) Humboldt Bay National Wildlife Refuge Complex Salmon Creek supports coho salmon, chinook salmon, and steelhead trout. The importance of these species warrants monitoring work. The proximity of the two offices and the lack of trained fishery personnel at the refuge will continue to provide opportunities for cooperation between HBNWRC and AFWO.
- 3) KTWG AFWO will continue to work with the other federal, state, tribal and local governments, as well

as private timber companies in restoring the Klamath River Basin and anadromous fisheries. AFWO views this as a significant opportunity to protect and restore anadromous fish habitat along the west coast.

4) The Northwest Forest Plan AFWO will continue to cooperate with other agencies to assist in the implementation this plan locally and regionally. Significant opportunities may exist to participate in the watershed analysis process, restoration and monitoring of watersheds and stream habitats, and comanaging these resources with federal, state and local agencies, and private companies. The office will continue to be actively involved in research projects on species covered by the Northwest Forest Plan

5) Trinity River Restoration Activities

AFWO anticipates continued involvement in the Trinity River basin in 1999 and more extensive involvement upon signing of a Record of Decision on the Trinity River EIS/EIR, which is likely to occur in 2000. Future involvement will be assisting in the implementation of the preferred alternative of the EIS/EIS, development and assessment of channel rehabilitation projects, and assessment of adult and juvenile salmonid habitat use and population levels.

6) Klamath River Restoration/Flow Study

AFWO anticipates continued cooperative involvement with the Biological Resource Division of U.S.Geological Survey, Fort Collins, Colorado in habitat assessments of the Klamath River. Habitat and population models will be used to assess future flow requirements for salmonids of the Klamath River. Recent and future efforts will be coordinated with agencies and tribes represented in the Klamath Basin.

Program planning, direction, and coordination will remain an essential and on-going part of AFWO activities. Program coordination and information dissemination to other groups and agencies involved with the Klamath-Trinity Basin fishery resource are recognized as high priorities. Frequent meetings will continue to be held with biologists representing U. S. Bureau of Reclamation, the California Department of Fish and Game, U.S.Forest Service, Hoopa Valley Tribe, Yurok Tribe, Karuke Tribe of California, Oregon Department of Fisheries and Wildlife, National Marine

Fisheries Service, Bureau of Indian Affairs, and other groups. Public involvement is also a critical component to effective management. A pro-active effort will be made by Service employees to inform other agencies, tribes, and the public of the need to protect and enhance natural resources.

FUTURE STAFFING NEEDS

A focus of the AFWO is to address staff needs in Federal Projects, Endangered Species, and JITW program areas. Additional staff is needed to meet continued growth in these program areas.

BUDGET

The AFWO operated with a total budget of \$3,361,351 in FY99. The cost breakdown by activity are provided in the following table.

Table 1. AFWO budget FY99.

PROJECT DESCRIPTION	ACTIVITY CODE	ALLOCATED FUNDING (\$)
Forest Plan		
Consultation	1112	515,000.00
Implementation	1113	949,426.00
Prelisting	1115	251,000.00
"Jobs-in-the-Woods"	1126	391,390.00
Other		
Project Planning (FERC)	1122	113,000.00
Anadromous Fish Management	1331	246,402.00
Fish and Wildlife Assistance	1332	21,000.00
Humboldt Bay Oil Spill	1907	14,681.00
Fisheries Population Monitoring	1937	859,458.00
Grand Total		3,361,357.00